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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/691,732

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Byeong-Ro Jeong

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EXAMINER

SELBY, GEVELL V

ART UNIT

PAPER NUMBER

2622

MAIL DATE

DELIVERY MODE

10/18/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/691,732

Applicant(s)

JEONG ET AL.

Examiner

Gevell Selby

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 July 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see the amendment, filed 7/25/07, with respect to the rejection(s) of claim(s) 7 under 35 U.S.C. 102(b) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Inaba, US 5,701,532.

2. Applicant's arguments filed 7/25/07 have been fully considered but they are not persuasive. The applicant submits the prior art does not disclose the following limitations of the claimed invention:

The combination of mechanisms to provide a camera lens with two rotations about two perpendicular pivot axes as taught in claim 1. The Examiner respectfully disagrees.

Examiner's Reply:

3. Re claim 1) In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

The Tseng reference discloses a cylindrical lens housing (see figure 4, element 10a) with a lens (see column 3, lines 13-17) and a first axial rotatable dial (see figure 4, element 25) that rotates the lens in a second direction and a slidable dial that rotates the lens in a first direction perpendicular to the second pivot axis. The Inaba reference teaches using a rotatable dial (see figure 7, element 56), a gear mechanism (see figure 7,

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element 52) and a cam mechanism (see figure 7, element 55R) to rotate the lens of a camera. It is obvious to one of ordinary skill in the art that dial, cam and gear mechanism can be rotating 90 degrees, in order to rotate the lens in a direction perpendicular to the previous rotation direction using the same configuration. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to have been motivated to replace the slidable dial and slant block combination of the Tseng reference with the dial, cam and gear configuration of the Inaba reference rotated 90 degrees, in order to make the structure compact and smaller, while allowing the user to rotate the lens with uniformly without having to touch the lens barrel. Therefore the combination of Tseng and Inaba discloses all the claimed limitations and the dependent claims are not allowable due to their dependency.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tseng et al., US 5,930,544, in view of Inaba, US 5,701,532.**

In regard to claim 1, Tseng et al., US 5,930,544, discloses a biaxially rotatable camera lens module, comprising:

a cylindrical lens housing (see figure 4, element 10a) with a lens (see column 3, lines 13-17);

a first axial rotatable dial (see figure 4, element 25), mounted on one end of the cylindrical lens housing, for rotating the lens about a second pivot axis (see column 3, lines 36-45).

The Tseng reference discloses a sliding dial (see figure 4, element 34a), for rotating the lens within a predetermined angle about a first pivot axis perpendicular to the second pivot axis (see column 3, lines 46-51), but does not disclose comprising:

a second axial rotatable dial, mounted on the other end of the cylindrical lens housing, for rotating the lens within a predetermined angle about a second pivot axis perpendicular to the first pivot axis;

a gear mechanism for transforming a first rotating motion of the second axial rotatable dial into a linear motion; and

a cam mechanism for transforming the linear motion of the gear mechanism into a second rotating motion and rotating the lens about the first pivot axis.

Inaba, US 5,701,532, discloses a camera comprising:

a rotatable dial (see figure 7, element 56), mounted on the cylindrical lens housing, for rotating the lens within a predetermined angle about a pivot axis perpendicular to the rotation axis of the dial (see column 6, lines 28-32);

a gear mechanism (see figure 7, element 52) for transforming a first rotating motion of the second axial rotatable dial into a linear motion (see column 6, lines 13-15); and

a cam mechanism (see figure 7, element 55R) for transforming the linear motion of the gear mechanism into a second rotating motion and rotating the lens about the first pivot axis (see column 6, lines 15-22).

It would have been obvious to one of ordinary skill in the art that replacing a strut, lug, and block with a rotatable dial, gear, and cam, is a mechanical equivalent for pivoting the lens. It is also obvious to one of ordinary skill in the art to move the location of the dial, in order to make the system more compact. . It is also obvious to one of ordinary skill in the art to rotate the dial, gear and cam configuration by 90 degrees, wherein the mechanism rotates the lens up and down using the same configuration.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to have been motivated to modify Tseng et al., US 5,930,544, in view of Inaba, US 5,701,532, to have:

a second axial rotatable dial, mounted on the other end of the cylindrical lens housing, for rotating the lens within a predetermined angle about a second pivot axis perpendicular to the first pivot axis;

a gear mechanism for transforming a first rotating motion of the second axial rotatable dial into a linear motion; and

a cam mechanism for transforming the linear motion of the gear mechanism into a second rotating motion and rotating the lens about the first

pivot axis, in order to make the structure compact and smaller, while allowing the user to rotate the lens with uniformity without having to touch the lens barrel.

In regard to claim 2, Tseng et al., US 5,930,544, in view of Inaba, US 5,701,532, discloses the biaxially rotatable camera lens module according to claim 1. The Inaba reference discloses wherein the gear mechanism comprises a first gear (see figure 7, element 52, top gear) extending along a central rotating axis of the second axial rotatable dial, and a second gear (see figure 7, element 52 bottom gear) causing a rack of the gear mechanism to move linearly in engagement with the first gear.

In regard to claim 3, Tseng et al., US 5,930,544, in view of Inaba, US 5,701,532, discloses the biaxially rotatable camera lens module according to claim 1. The Inaba reference discloses wherein the cam mechanism comprises a first convexly shaped cam (see figure 7, element 54R) for cooperating with the linear motion, and a second concavely shaped cam (see figure 7, element 55R) for rotating the lens about the first pivot axis during a sliding linear movement while being in contact with the first cam.

In regard to claim 4, Tseng et al., US 5,930,544, in view of Inaba, US 5,701,532, discloses the biaxially rotatable camera lens module according to claim 1. The Inaba reference discloses wherein the lens further comprises a cam body (see figure 7, element 54r) with which the cam mechanism is integrally connected.

In regard to claim 5, Tseng et al., US 5,930,544, in view of Inaba, US 5,701,532, discloses the biaxially rotatable camera lens module according to claim 4. The Inaba reference discloses wherein the cam body is formed with a protrusion extending along the first pivot axis (see figure 7, element 54R).

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In regard to claim 6, Tseng et al., US 5,930,544, in view of Inaba, US 5,701,532, discloses the biaxially rotatable camera lens module according to claim 1. The Tseng reference discloses wherein the first pivot axis extends in a horizontal direction (right to left), and the second pivot axis extends in a vertical direction (up and down) (see column 3, lines 43-48).

In regard to claim 7, Tseng et al., US 5,930,544, discloses a biaxially rotatable camera lens module, comprising:

- a main housing(see figure 4, element 1a); and

- a camera lens housing (see figure 4, element 10a) mounted on a predetermined position of the main housing,

- wherein a camera lens of the camera lens housing is provided an up-down-down rotation on the basis of a first pivot axis and, on the basis of a second pivot axis perpendicular to the first pivot axis, a left-and-right rotation (see column 3, lines 36-50).

The Tseng reference does not disclose a cam and gear mechanism for providing the up-and-down rotation.

Inaba, US 5,701,532, discloses a camera comprising:

- a rotatable dial (see figure 7, element 56), mounted on the cylindrical lens housing, for rotating the lens within a predetermined angle about a pivot axis perpendicular to the rotation axis of the dial (see column 6, lines 28-32);

a gear mechanism (see figure 7, element 52) for transforming a first rotating motion of the second axial rotatable dial into a linear motion (see column 6, lines 13-15); and

a cam mechanism (see figure 7, element 55R) for transforming the linear motion of the gear mechanism into a second rotating motion and rotating the lens about the first pivot axis (see column 6, lines 15-22).

It would have been obvious to one of ordinary skill in the art that replacing a strut, lug, and block with a rotatable dial, gear, and cam, is a mechanical equivalent for pivoting the lens. It is also obvious to one of ordinary skill in the art to rotate the dial, gear and cam configuration by 90 degrees, wherein the mechanism rotates the lens up and down using the same configuration.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to have been motivated to modify Tseng et al., US 5,930,544, in view of Inaba, US 5,701,532, to have a cam and gear mechanism for providing the up-and-down rotation, in order to allow to rotate the lens smoothly to the desired position.

Conclusion

3. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gevell Selby whose telephone number is 571-272-7369. The examiner can normally be reached on 8:00 A.M. - 5:30 PM (every other Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lin Ye can be reached on 571-272-7372. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

gvs


LIN YE
SUPERVISORY PATENT EXAMINER